

Draft Title I Design, Volume 3, Landfill Leachate Collection System Design Analysis, EDF-EDR-280

ITEM	SECTION/ FIGURE/ APPENDIX	PAGE	COMMENT	RESOLUTION
102	Section 1, Design Criteria	Page 1-1, Paragraph 2	<p><i>"The primary criterion is that all leachate be collected and removed from the landfill at a rate sufficient to prevent a hydraulic head greater than 12 in. from occurring at any point over the lining system."</i></p> <p>Please include the calculations used to determine "hydraulic head at any point". These calculations become increasingly important during the operation activity and post-closure activity associated with the landfill.</p>	The HELP model was used to calculate maximum hydraulic head over the liner. Please refer to EDF-ER-269, Section 3.1. Note that this head estimate will be cross-checked using Mound Method Equation, as detailed in EPA530-R-93-017, Solid Waste Disposal Facility Criteria — Technical Manual, 11-1993, revised 1998, pages 171-173, per EPA Comment 79.
103	Section 2.4	Page 2-2, Last Sentence	Additional specificity regarding the apparent opening size is expected in the 90 percent RD/RA Work Plan.	This information will be provided in the 90% deliverable.
104	Section 3., Leachate Pump Analysis		<p>a) Please briefly describe the indicator system that will cycle the pumps on and off. We would like to better understand this important aspect of the leachate collection/detection/and removal systems.</p> <p>b) Easy access to the pump for repair or replacement is essential. Pump removal is time consuming, increases the risk of damaging the pump/discharge pipe and often results in leakage from the pump, associated discharge pipe, and wet equipment surfaces removed from the leachate riser. Minimization of these activities is strongly advised.</p>	<p>Details of the indicator system will be provided in the 90% drawings. Generally, the pumps will be operated based on level measured using a pressure transducer.</p> <p>We agree with this comment and have designed a leachate pumping system to accommodate the need for future access and maintenance. A description of the pump system and down slope risers were discussed at the meeting.</p>

ITEM	SECTION/FIGURE/APPENDIX	PAGE	COMMENT	RESOLUTION
105	Section 3.1 Low-Flow Pump	Page 3-1, Second Paragraph	<p>"For convenience and operational versatility, a roller-mounted pump was selected for the leachate sump. This type of pump can be lowered into the leachate sump through a pipe and removed as needed. The advantages of a removable pump include easy access for maintenance and the ability to use the pump for several sump-pumping operations. A fixed, mounted sump pump may be more appropriate for continuous pumping operations; the ICDF sump would only require periodic pumping."</p> <p>a) Please clearly define the <i>leachate sump</i> and the <i>ICDF sump</i> in the text and locate on a figure or drawing.</p> <p>b) Please describe an example of how the portable pump would be used for several sump-pumping operations.</p>	Will clarify in the revised 30% deliverable.
106	Section 6	Page 6-1	<p>Since the text provides little information regarding the leachate detection sump and associated piping/pumps, we are unable to provide specific comment on this portion of the design and compliance with 40 CFR 264.301(c) (3) (v). It is expected that the leachate detection system will be described much more fully in a subsequent submittal.</p>	<p>One pump would be used for both of the leachate leak detection systems in both cells of the evaporation pond.</p> <p>This information will be provided in the 90% deliverable.</p>

Draft Title I Design, Volume 3, Liner/Leachate Compatibility Study, EDF-EDR-278

ITEM	SECTION/FIGURE/APPENDIX	PAGE	COMMENT	RESOLUTION
107	Section 1.1	Page 1-1, First Paragraph, Last Sentence	The sentence segment, “‘near or above the limits specified by the manufacturer” needs to be better defined since the “near” does not provide any tolerances.	The 90% deliverable will provide a better definition of the allowable tolerances.
108	Section 1.1	Page 1-1, First Paragraph	Please note that this EDF-ER-278 appears to only address the landfill liner/ leachate scenario. Please augment the text with the Evaporation Pond considerations or provide a separate EDF that considers the EP's special needs.	The 90% deliverable will address both the landfill and the evaporation pond.
109	Section 1.1	Page 1-1, First Paragraph, Last Sentence	The referenced text states that physical testing will be performed in accordance with EPA method 9090 if a leachate concentration is identified near or above the limits specified by the manufacturer. We agree with this strategy. However, it appears to be inconsistent with statements elsewhere in the design package that indicate that USDOE does not want to test leachate prior to discharge to the evaporation pond. As discussed in Comment #157, we assert that some periodic sampling of the landfill leachate will be needed to ensure that the requirements of 40 CFR 264.552 (c) (2) and 40 CFR 264.552 (c) (4) are met.	Sampling of leachate is planned to be performed concurrent with discharge from the ICDF to the evaporation pond. The DQO's will be developed and included with the 60% submittal.
110	Section 1.3	Page 1-1, First Paragraph	Solar degradation vis-à-vis ultraviolet light attack should also be added to this section especially if this document will cover both the evaporation pond and associated exposures.	Ultraviolet light attack will be included in the 90% deliverable to verify that the exposed liners will be effective for the proposed design life..
111	Section 2, Contaminant Concentrations in Leachate	Page 2-1, General Comments	a) We are very concerned that, based on the design inventory and the assumptions presented in EDF-ER-274, all organic contaminants have been screened out of the Liner/Leachate Compatibility study. IDEQ and USEPA have repeatedly expressed concerns regarding the	All constituents identified in future versions of the WAC will be included in this EDF and specific WAC limitations will be developed for these constituents. Leachate pH will also be discussed in the WAC limitations. This will be provided in the 60% submittal.

ITEM	SECTION/ FIGURE/ APPENDIX	PAGE	COMMENT	RESOLUTION
			<p>representativeness of the design inventory for organic contaminants. It is our belief that the database of existing sampling information is not representative of contamination likely to be encountered when the remedial action excavation begins. This is especially true for sites at which the area of suspected greatest contamination was inaccessible for sampling during the remedial investigation due to buried pipes, utilities, and/or structures, or for sites at which there were no surface indication of hotspots. Section 1.3 acknowledges that organic contaminants have the potential to chemically degrade the liner materials, and the Liner Manufacturer's Chemical Resistance data presented in Appendix A indicates "unsatisfactory" test results for TCE. Therefore, if it is desired that the ICDF be able to accept organic contaminants, this section and the WAC need to establish the limits of organic contaminants that can be accepted in the landfill without adverse effects on the liner system. Based on these limits, a sampling strategy needs to be developed that adequately profiles the wastes for these critical contaminants as the remedial action (i.e., excavations) proceeds and the wastes are generated.</p> <p>b) The effect of pH on liner performance is not discussed, nor are anticipated pH ranges for ICDF leachate presented. Please address.</p>	<p>Accept</p>
112	Section 4, Liner Material Performance, Table 4.1	Page 4-1	<p>a) The column titled "Material Performance at 20°C" is duplicated.</p> <p>b) In the example for Chlorine CL, the columns entitled "Material Performance at 20°C" is contradictory.</p>	<p>Accept</p>
113	Section 5, References		The cited Leachate/Contaminant Reduction Time Study is EDF-274, not EDF-278. Please correct.	<p>Accept</p>

Draft Title I Design, Volume 4, Waste Acceptance Criteria for ICDF Landfill, DOE/ID-10865

ITEM	SECTION/ FIGURE/ APPENDIX	PAGE	COMMENT	RESOLUTION
114	Nomenclature	Page XV, <i>Sample Containers</i>	Please include <i>glass</i> in the list of "Vessels". Pre-cleaned glass bottles are frequently used to contain environmental samples.	Incorporated
115	Waste Acceptance Process, Section 2.1	Page 2-1, Second Paragraph, First Sentence	This sentence appears to be internally inconsistent with respect to what is a " <i>minimum requirement</i> " versus activities that are only performed " <i>as necessary</i> ." Please revise the sentence for clarity.	Sentence will be re-written to "Waste proposed for disposal at the ICDF will be characterized for radionuclides, metals, organics and other parameters needed to complete the Waste Profile."
116	Waste Acceptance Process, Section 2.1	Page 2-1, Second Paragraph, Fourth Sentence	Process knowledge is insufficient to determine that a material which exceeds the 20X rule is not a hazardous waste. Please revise the sentence to indicate that a TCLP analysis will be performed in those instances the 20X rule is exceeded and where a hazardous waste determination is required (i.e., for wastes from outside the AOC and wastes from within the AOC that have triggered placement.)	Below the 20X rule can be used to show a TCLP analysis is not required. For over 20X, if other available information is not available to quantitatively show the waste is not hazardous, a TCLP analysis will be performed.

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117	Waste Acceptance Process, Section 2.1, General Comment	Page 2-1, Third Paragraph, General Comment	<p>Although we do not disagree with the general concepts presented in this paragraph, the text is vague and thus highlights a significant concern we have regarding waste characterization requirements as documented in this WAC. There is little in the way of specific sampling requirements presented in this document. The text appears to minimize the WAG-3 Agency input into the waste characterization process, and defers all decision-making authority regarding sampling needs for ICDF Acceptance to the "ICDF Complex Management." This is not appropriate. The WAC should either outline specific sampling needs or develop a mechanism for Agency involvement in evaluating the acceptability of the characterization process. See Comment #'s 111(a), 120, and 125 for specific concerns regarding this issue.</p>	<p>The SSSTF WAC and the waste profile approval process will be available for review in July. The coordination between the SSSTF WAC and the representativeness of sampling will be further defined in the 60% WAC.</p> <p>a) The table should indicate that wastes from within the AOC that have triggered placement also must meet land disposal restrictions.</p> <p>b) The table should indicate that mixed waste must also meet land disposal restrictions, as necessary (similar to that shown for hazardous wastes).</p> <p>a) Incorporated, the following will be added under "Hazardous Wastes": "Wastes from inside the AOC that have triggered placement must meet the land disposal restrictions (LDR shown in Table 5-4) and UTS requirements in Appendix C."</p> <p>b) incorporated, Mixed wastes from outside the AOC that have mixed wastes from inside the AOC that have triggered placement, and Mixed Wastes from inside the AOC that have not triggered placement have been added to the table, with language parallel to that for hazardous waste.</p>
118	Section 2.2, Table 2-1	Page 2-1		<p>Segregation and handling of incompatible wastes is an SSSTF function. The following text was added to the SSSTF WAC, Section . "Incompatible wastes (40 CFR 264.10) which require special handling or segregation must be identified in the waste profile, including the Appendix V group number and the precautions must be</p>
119	Section 2.4.2	Page 2-3, General Comment	The text should include a discussion of how incompatible wastes will be identified and addressed.	

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			listed. Once incompatible wastes are received at the ICDF complex they will be staged/stored with like materials based on Appendix V groups." The following was also added to the Waste Profile: Appendix V wastes ____yes ____no. If yes, attach details and handling instructions.	
120	Section 2.4.3	Page 2-4, Third Sentence	The text should clarify that RI/FS data may be used if those data are representative of wastes resulting from implementation of the remedy. As indicated in our November 30, 2000 comments on the 30 Percent Design for the SSSTF (Comment 7), investigation data used for remedy selection may not be representative of remediation wastes encountered once excavation occurs. This is especially true for sites at which the area of suspected greatest contamination was inaccessible for sampling due to buried pipes/utilities and/or structures, or for sites at which there were no surface indications of hotspots. The Agencies shall determine whether existing data are likely to be representative of remediation wastes generated. Please modify the text.	USDOE agrees that investigation data may not meet the requirements for waste disposal. Additional criteria, such as meeting the definition of a representative sample as defined in 40 CFR 264.10, will be included to ensure that the data meets the specific purpose. However, representativeness will be the responsibility of the generating project to meet the criteria identified in the ICDF Landfill and identified in the generating project CERCLA documentation. The Agencies, through approval of the WAC, will determine the requirements that the data has to meet to ensure that the waste is within the limit of the ICDF landfill WAC.
121	Section 2.4.4	Page 2-4, Second Bullet	Note that specific alternative management paths must receive Agency concurrence. If sufficient detail regarding these alternative strategies cannot be put into the Group 3 RD/RA documents because site specific conditions are unknown at this time, then Agency concurrence must be sought on a case-by-case basis when the situation arises. We cannot at this time concur with procedures that are as yet to be developed/negotiated with the ICDF Complex.	Agree.
122	Section 2.5.1	Page 2-4,	Please explain what is meant by "for wastes that	The sentence was re-written to : "For waste that cannot

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		Last Bullet	<i>cannot be radiologically released".</i>	be radiologically released (waste with very low levels of radiological contamination that are still above the INEEL Site release criteria for non radiological waste) an estimate of radiological constituents will be included in the waste profile for tracking purposes.
123	Section 2.5.2	Page 2-5, Sixth Paragraph	Please identify the anticipated direct measurement field and laboratory methods that will be used to characterize radioactivity in the waste.	Appropriate measurement methods should be identified in the sampling plan for the generating project as part of the generating project CERCLA documentation.
124	Section 2.5.2	Page 2-6, First Sentence on Page	Please specify the proposed frequency of the periodic radionuclide-specific analysis.	See response to comment #123. Criteria will be established that identifies the DQOs for acceptance of the waste into the landfill and will be included in the 60% submittal.
125	Waste Acceptance Process, Section 3	Page 3-1, First Paragraph, Eighth bulleted item	The third sentence indicates that verification consists of non-intrusive analysis such as a surface radiological survey. We agree that the radiological survey and visual observation of the waste are essential components of verification. However, use of only the... techniques may not identify nonconforming constituents within the waste. For example, non-intrusive sampling will be of little value in verifying the presence and/or concentrations of heavy metals.	The waste determination and profile will detail the waste characterization prior to receipt at the ICDF Complex. Therefore the verification at the gate will not be needed to approve the Waste determination of characteristics.
126	Planning, Section 3.1.2, Table 3-1	Page 3-4	The text should be augmented with language that requires the PM to relay any delay/ deviations at the WAG to the ICDF Complex Manager as soon as it is known/ possible to prevent disruptions to the landfill operation. For example, if the ICDF Complex is relying upon a mostly-soil waste stream to arrive on-site in order to fill void spaces between boxes/debris and the waste delivery is delayed, this impact to disposal operations may be significant.	The following language has been added to the WAC – "It will be the responsibility of the WAC manager to notify the ICDF Complex Operations manager of any delay or deviation from the Waste Profile that may occur after the receipt of the shipping date. This may require that the profile be amended and approval of a new shipping date.
127	Waste Profile, Section 3.4,	Page 3-6, Last Sentence	Please modify this sentence to read," with the waste generators, temporary storage at the SSSTF may be an option, until suitable, off-site	Comment accepted. Language has been changed.

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128	Section 3.4.2	Page 3-6	<i>options are identified and secured.</i> "	Please identify the criteria used to determine acceptance of special case waste, and the procedures used to place these wastes in the cell (e.g., minimum distance from liner). Note that these criteria and procedures must receive Agency concurrence. If sufficient detail regarding these cannot be put into the Group 3 RD/RA documents because site specific waste forms are unknown at this time, then Agency concurrence must be sought on a case-by-case basis when the situation arises. We cannot at this time concur with criteria/procedures that are as yet to be developed.
129	Section 3.9	Page 3-8, First Paragraph, Second Bulleted Item	We expect that this record-keeping requirement to be defined in more detail within the SSSTF 90% Design Document. The efficient compliant operations within a landfill dictate uniform loading and compaction of the landfill. Contaminated Soils will be pushed and graded during landfill operations. The record keeping of "cell locations of wastes," and the compliance measure for this requirement should be well understood and documented. Therefore, we recommend that the Agencies discuss and agree upon cell/grid size during the comment resolution period.	The O&M Plan in the RD/RA Workplan will define these procedures. Acceptable grid size was not established except an equivalent volume of 25' x 25' x 10' was agreed upon.
130	Shipping, Section 3.10.1	Page 3-9, Third Sentence	"Generators should be required (not merely advised) to reduce void spaces in containers as much as possible. Please correct the text."	Incorporated.
131	Criteria Basis, Section 4-1	Page 4-1, Second Sentence	Please define what is envisioned by " <i>inactive treatment, storage, and disposal, and RCRA past practice waste.</i> " These must be clearly defined since the ICDF is only authorized to accept CERCLA wastes.	The text will be clarified that only CERCLA wastes will be disposed in the ICDF.
132	Criteria Basis,	Page 4-1,	Please add the following to the beginning of this	This sentence will be deleted. Waste profile process

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	Section 4-1	Third Sentence	sentence "With Agency approval, . . ."	will provide avenue for agency approval.
133	Hazardous Waste Section 5.1.3	Page 5-1, Last Two Sentences	<p>a) The text should specify that the 20X rule applies to metals, not organic contaminants.</p> <p>b) We disagree with the last sentence which indicates that if concentrations exceed the 20X rule, the decision of whether or not to perform a TCLP analysis is made <i>at the discretion of the ICDF manager or designee</i>. Please revise the sentence to indicate that a TCLP analysis will be performed in those instances that the 20X rule is exceeded and where a hazardous waste determination is required (i.e., for wastes from outside the AOC and wastes from within the AOC that have triggered placement.)</p>	We agree that the 20X rule applies to metals and that if metals exceed the 20X rule that a TCLP analysis will be performed. In the case of organics, below the 20X rule can be used to show a TCLP analysis is not required. For over 20X, if other available information is not available to quantitatively show the waste is not hazardous, a TCLP analysis will be performed.
134	Section 5.1.4, Free Liquids; Table 5-1, second column, second row	Page 5-1; Page 5-2 (Table 5-1)	" All freestanding liquid has been decanted, solidified with nonbiodegradable sorbent materials, stabilized, or otherwise eliminated."	Footnote added to the table – A procedure for this will be developed and incorporated into the ICDF O&M Manual.
135	Section 5.2.1	Page 5.2, First Paragraph	Please specify the procedure(s) to be used to document these conditions to be met.	Asbestos disposal will be in accordance with the applicable regulations.

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136	Outside of AOC Wastes and AOC Waste that Have Triggered Placement, Section 5.2.4	Page 5-4, First Complete Sentence on Page	<p>"All waste analysis and supporting information relative to LDR compliance shall be retained for a minimum of 5 years."</p> <p>This sentence appears to conflict with Section 3.9, Records, first paragraph text, which states, "All records will be kept on file at the ICDF Complex indefinitely per DOE-ID letter dated November 26, 1991, signed by C. J. Webb." The first bulleted item requires, "Waste profiles and any accompanying forms (i.e., analytical results)". Please clarify.</p>	The reference in Section 3.9 will be changed to match the language in section 5.2.4.																		
137	Section 5.2.4, Outside of AOC Wastes and AOC Wastes that Have Triggered Placement, Table 5-4	Page 5-4	In Table 5-4, the last column "Regulatory Standard" for waste codes D004 through D011 contains several mistakes. The non-wastewater treatment standards are listed in 40 CFR 268.40. The first part of Table 5-4 should be changed to read as follows:	<p>The table will be corrected.</p> <table> <thead> <tr> <th>Waste Code</th> <th>Regulatory Standard</th> </tr> </thead> <tbody> <tr> <td>D004</td> <td>5.0 mg/l TCLP and meet UTS</td> </tr> <tr> <td>D005</td> <td>21 mg/l TCLP and meet UTS</td> </tr> <tr> <td>D006</td> <td>0.11 mg/l TCLP and meet UTS</td> </tr> <tr> <td>D007</td> <td>0.6 mg/l TCLP and meet UTS</td> </tr> <tr> <td>D008</td> <td>0.75 mg/l TCLP and meet UTS (based on TCLP)</td> </tr> <tr> <td>D009</td> <td>0.20 mg/l TCLP and meet UTS (based on TCLP & < 260 mg/kg)</td> </tr> <tr> <td>D010</td> <td>5.7 mg/l TCLP and meet UTS</td> </tr> <tr> <td>D011</td> <td>0.14 mg/l TCLP and meet UTS</td> </tr> </tbody> </table>	Waste Code	Regulatory Standard	D004	5.0 mg/l TCLP and meet UTS	D005	21 mg/l TCLP and meet UTS	D006	0.11 mg/l TCLP and meet UTS	D007	0.6 mg/l TCLP and meet UTS	D008	0.75 mg/l TCLP and meet UTS (based on TCLP)	D009	0.20 mg/l TCLP and meet UTS (based on TCLP & < 260 mg/kg)	D010	5.7 mg/l TCLP and meet UTS	D011	0.14 mg/l TCLP and meet UTS
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138	Outside of AOC Wastes and AOC Waste that Have Triggered Placement, Section 5.2.4, Table 5-4	Page 5-6	Chlorobenzene should be added as a Regulated Hazardous Constituent and the last column "Regulatory Standard" should be 6.0 mg/kg for waste codes F001-F005.	Incorporated.
139	Section 5.2.5	Page 5-7	The text should also clarify that although selection and use of solidification and stabilization agents may be performed in accordance with the WTP for the CERCLA action generating the waste, the ICDF/WAG-3 team shall be responsible for determining whether the stabilized waste form adequately meets the WAC and/or LDRs based on post-treatment (i.e., back-end) testing results.	<p>The CERCLA action generating the waste must provide with the waste profile sheet the required information demonstrating that the treated waste meets the WAC and/or LDR requirements for the waste. The ICDF Operations Manager will review and accept or require further clarification of the data prior to acceptance of the waste into the ICDF Complex. Without this acceptance the waste will be sidelined at the gate. This will be addressed in the SSSTF RD/RRA Work Plan.</p> <p>a) The ICDF landfill WAC will include the Class C limits as a criteria in addition to the WAC determined criteria.</p>
140	Radiological Concentration Limits, Section 5.3.1	Page 5-8, Last Sentence		<p>a) We recognize that the reference to "Class C" in this sentence and elsewhere in this section is taken from 10 CFR 61.55, which establishes a classification system of low-level wastes for shallow burial. IDEQ supports conversion of this classification system for use by the ER FFACO program providing it is demonstrated to be protective of the SRPA. Concentration limits from this classification system must be at least as stringent as the selected OU 3-13 model-generated values deemed by the Agencies to be protective.</p> <p>If the 10 CFR 61.55 classification is used, we recommend that the concentrations presented in CFR Tables 1 and 2 be converted from curies/cubic meter to picocuries/gm to be consistent with the reporting format used by the INEEL ER Program. Attachment 1 is a sample table created by calculating this unit</p>

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			<p>conversion. This sample table could be augmented to include the other long-lived radionuclides and incorporated with lists of isotopes found in the Appendix B tables to create an inclusive table of radiological concentration limits for the WAC.</p> <p>b) Also, we question the use of the “<i>inventory concentration of the waste source</i>” to determine whether wastes are acceptable for transportation and disposal at the ICDF. The viability of the waste inventory depends on the representativeness of the samples in the existing database. See comment #120.</p>	<p>b) See response to comment #123.</p>
141	Waste Containing Greater than 10 nCi/g of TRU Constituents Section 5.3.1.1	Page 5-8	<p>It is IDEQ's opinion that the ICDF will not accept waste containing >10nCi/g of TRU constituents in an “as discovered condition.” As written, the referenced sentence appears to pose a conflict as it could be interpreted to allow intentional mixing (thus dilution) of wastes. IDEQ does not support intentional dilution of wastes with > 10nCi/g of TRU constituents to meet the WAC . Please modify the text.</p>	<p>The text will be changed to exactly what is in the ROD.</p>
142	Packaging Criteria, Section 5.4.5	Page 5-10, Entire Paragraph	<p>It may be more efficient if the “generator” must provide details concerning special unloading requirements at the time the waste is profiled rather than at the time the shipment is scheduled.</p>	Incorporated.
143	Packaging Criteria, Section 5.4.6	Page 5-11, Last Paragraph	<p>Please include the reasoning/justification for establishing the “2 inch” criteria for void spaces.</p>	<p>The 2-inch criteria has been deleted from the sentence and the 60% deliverable will identify that all voids will be considered in this judgement.</p>

Draft Title I Design, Volume 4, Waste Acceptance Criteria for ICDF Evaporation Pond, DOE/ID-10866

ITEM	SECTION/FIGURE/APPENDIX	PAGE	COMMENT	RESOLUTION
144	Nomenclature	Page xii, Sample Containers	Please include <i>glass</i> in the list of "Vessels". Pre-cleaned glass bottles are frequently used to contain environmental samples.	Incorporated
145	Scope, Section 1.2	Page 1-2, First Paragraph, Second Sentence	" . . . The ICDF leachate will be pumped directly to the ICDF evaporation pond." This sentence suggests that the leachate will not be filtered to remove suspended solids. We disagree with this proposal. Leachate may have a high suspended solids content. This assumption is apparently supported by the type of flow meters proposed in Section 4.5, of the Engineering Design File EDF-ER- 280, Landfill Leachate Collection Systems Design Analysis which states that, " <i>Flow meters will be paddlewheel type with linear response to velocity. This type of meter has been proven in landfill leachate applications, where particles may be present in the liquid flow.</i> "	The process of landfill leachate generation includes an intrinsic filtration as the leachate must pass through gravel and geotextile prior to being collected in the sump. Additional filtration is not planned to be provided for the leachate collection system.

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			damaging the liner system, which increases with the amount of solid buildup upon the liner. For this reason, filtration of leachate prior to discharge to the evaporation pond is recommended.	
146	Scope, Section 1.2,	Page 1-2, Last Paragraph, First Sentence	The addition of the word, "protection" after ultraviolet light would clarify the feature of the upper HDPE membrane.	Incorporated
147	Section 1.5.1	Page 1-5, Second Paragraph, Bulleted Items	Other responsibilities for this team will also include conducting periodic inspections of the pond.	Incorporated
148	Type of Acceptable Knowledge, Section 2.4.1	Page 2-2, First Bullet	Analytical results from previous sampling of the well may be used if the previous analyte list included all potential contaminants of concern, the well was previously sampled at the same depth that generated the current waste stream, and using the same sample collection procedures (e.g., high flow v. low flow pumping). Please add these clarifications to the list.	Required representativeness of the data will be included in the 60% deliverable.
149	General Knowledge Requirements, Section 2.4.2	Page 2-2, Last Paragraph	See Comment #148 qualifications regarding use of previous sampling data.	Required representativeness of the data will be included in the 60% deliverable.
150	General Knowledge Requirements Section 2.4.2	Page 2-2, general comment	The text should include a discussion of how incompatible wastes will be identified and addressed.	The SSSTF WAC will address this issue and will be coordinated with the 60% deliverable.
151	Exceptions to Physical and Chemical Characterization	Page 2-3	Note that specific alternative management paths must receive Agency concurrence. If sufficient detail regarding these alternative strategies cannot be put into the Group 3	Agree.

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	n Requirements, Section 2.4.4		RD/RRA documents because site specific conditions are unknown at this time, then Agency concurrence must be sought on a case-by-case basis when the situation arises. We cannot at this time concur with procedures that are as yet to be developed/negotiated with the ICDF Complex..	Process knowledge can be used to determine specific constituents that are not included in a waste stream. We will clarify the text to be more specific regarding using process knowledge in developing required analyte lists.
152	Section 2.5.2	Page 2-4, Third Paragraph, Third and Fourth Sentences	<p>a. In the absence of any previous sampling data, we recommend extreme caution in use of process knowledge to eliminate from further consideration those radionuclides not present in sufficient concentration to be major radionuclides.</p> <p>b. In addition, we do not understand how process knowledge alone could ever be sufficient to quantify the radionuclide inventory of a waste. Please clarify.</p>	The SSSTF will provide some sediment removal. The evaporation pond WAC (60% submittal) will also address TSS limits.
153	Planning, Section 3.1, Waste Streams and Volumes, Section 3.1.1	Page 3-1, First Paragraph, General Comments on Bulleted Items	ICDF landfill leachate, aqueous wastes generated in the ICDF complex and from CERCLA investigative, remedial, and removal activities at the INEEL WAGs, Secondary aqueous waste from waste processing and decontamination activities inside the SSSTF and ICDF Complex and Purge and development water from monitoring wells are all high potential TSS/TDS waste streams. Filtering of these waste streams is strongly recommended to remove as much of the total suspended solids as possible. See comment #145.	

ITEM	SECTION/ FIGURE/ APPENDIX	PAGE	COMMENT	RESOLUTION
154	Waste Profile, Section 3.4	Page 3-2, First Paragraph, Last Sentence	This statement is very vague. We recommend that the Agencies discuss monitoring needs for the evaporation pond. See comment #157.	DQO's will be developed and provided in the 60% submittal.
155	Waste Profile, Section 3.4.2	Page 3-3, Second Sentence	Liquid special case wastes can not be disposed in the ICDF landfill. Please modify the text to correspond to evaporation pond wastes.	Incorporated
156	Section 4.1.3, Protection of the ICDF Evaporation Pond Liner System	Page 4-2, Second Paragraph	Please identify the criteria that will be used by the ICDF Management on a case-by-case basis to determine chemical equivalency through a paper study. Note that these criteria must receive Agency concurrence. If sufficient detail regarding these cannot be put into the Group 3 RD/RA documents because site specific waste forms are unknown at this time, then either EPA Method 9090 will be required to demonstrate compatibility or Agency concurrence on the paper study must be sought on a case-by-case basis when the situation arises.	Results will be included in 90% deliverable for the SSSTF..
157	Appendix A: Regulatory Analysis regarding the ICDF Evaporation Pond Corrective Action Management Unit		This paper presents USDOE's position on several issues regarding the ICDF Evaporation pond Corrective Action Management Unit (CAMU). Specifically, the paper explores 1) the impact of the CAMU rule being withdrawn and re-proposed, 2) the regulatory restrictions on wastes discharged to the pond, and 3) the necessity of sampling to demonstrate compliance with LDRs. We agree that this CAMU will be "grandfathered" since the OU 3-13 ROD was signed in October 1999, and since the newly proposed CAMU rule was promulgated on August 22, 2000 (65 FR 51080-51135) and has not yet	Agree.

ITEM	SECTION/ FIGURE/ APPENDIX	PAGE	COMMENT	RESOLUTION
			<p>been finalized (final target publication date of October 2001). We also agree that CERCLA remediation waste may be sent to the pond, consistent with the OU 3-13 ROD. However, the statement on Page A-8 that indicates that “any remediation waste may be placed in the pond” needs to be qualified. The remedy must comply with 40 CFR 264.552(c)(2) which specifies that “waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents” and with 40 CFR 264.552(c)(4) which states that “areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize releases, to the extent practicable.” Therefore, wastes discharged to the evaporation pond must not pose an unacceptable risk to receptors via a windblown pathway, nor would discharge of wastes which could be incompatible with the pond liners be allowed. Additionally, the pond should be managed in such a way as to minimize the potential of future releases. This is the reason that we propose minimization of solids (filtering waste streams) discharged to the pond (see comment #'s 145 and 153). In addition, it is possible that there are investigation-derived wastes or remediation wastes that will be generated on the INEEL which could be incompatible with the pond liners (e.g., purge and development waters from wells to be drilled in the immediate vicinity of the CPP-03 may be high</p>	

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			<p>in organic contaminants, waters generated from portions of the TAN groundwater remedial action are high in TCE concentrations [we recognize that, at this time, no TAN groundwater remediation waters are planned to be transported to the CAMU; but nonetheless it demonstrates the need to qualify the referenced sentence.]. Although sampling of waste streams to the pond is not required to demonstrate compliance with LDRSs, some sampling of leachate and other waste streams will be necessary to ensure compliance with the above-referenced CAMU requirements. It is recommended that the analyte list and sampling frequencies needed to address this ARAR be discussed and initially developed during the comment resolution period.</p>	

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ITEM	SECTION/ FIGURE/ APPENDIX	PAGE	COMMENT	RESOLUTION
158	DWG-L-201	<i>Leachate Piping Plan</i>	We are unable to distinguish which pumps serve the leachate collection system versus the leachate detection system. Please clarify on the drawing.	Clarification of pump layout will be provided in the 90% design submittal.
159	DWG-L-201	<i>Leachate Piping Plan</i>	<p>a) Drawing L-201, in the area illustrating the apron for the EVAPORATION PONDS, there is a figure identified as "TRUCK LOADING". It is assumed that truck unloading is the activity planned. If trucks are used to evacuate the EVAPORATION PONDS, please describe the progression of management for this "removed material".</p> <p>b) Drawing P-201, LEACHATE SYSTEM P & D, for the LANDFILL SUMP, Indicate that "TRANSDUCERS (ATTACH TO PUMP COLUMNS)." Please include, in the text, the range of accuracy specified for the instruments and how data collected from their use will be used to calculate "static head upon the Landfill liner".</p>	<p>System is designed for loading from the evaporation pond as well as unloading to the evaporation pond. A discussion will be added to clarify that loading from the evaporation pond is only anticipated during emergency operations to empty pond for repair.</p> <p>Will include the accuracy of these transducers in the 90% deliverable.</p>
160	DWG-C-304	<i>Cell 1 and Cell 2 Final Cover Plan</i>	The elevation 4960 ft. topographic line is labeled both 4960 ft. and 4900 ft. Please correct.	Will correct this elevation discrepancy in 90% design submittal.

Table 1: Classification Based on Long Lived Radionuclides

- For reference only, see 10-CFR-61.55 for a complete listing of requirements
- To be used if radioactive waste contains ONLY the radionuclides shown in Table 1.
- If waste exceeds values for Class "C" per Table 1, the waste is NOT generally acceptable for near-surface disposal
- For wastes containing mixtures of radionuclides shown in Table 1, the total concentration shall be determined using the sum of fractions rule described in 10-CFR-61.55, paragraph (a) (7)

Radionuclide	Class A	Class B	Class C
C-14	$\leq 533,333$	NA	$> 533,333 \text{ and } \leq 5,333,333$
C-14 in activated metal	$\leq 5,333,333$	NA	$> 5,333,333 \text{ and } \leq 53,333,333$
Ni-59 in activated metal	$\leq 14,666,666$	NA	$> 14,666,666 \text{ and } \leq 146,666,666$
Nb-94 in activated metal	$\leq 13,333$	NA	$> 13,333 \text{ and } \leq 133,333$
Tc-99	$\leq 200,000$	NA	$> 200,000 \text{ and } \leq 2,000,000$
I-129	$\leq 5,333$	NA	$> 5,333 \text{ and } \leq 53,333$
Alpha emitting TRU nuclides with $T^{1/2} > 5$ years (i.e., Pu-238, 239, 240, 243, Am-241, 243, Np-237, etc...)	$\leq 10,000$	NA	$> 10,000 \text{ and } \leq 100,000$
Pu-241	$\leq 350,000$	NA	$> 350,000 \text{ and } \leq 3,500,000$
Cm-242	$\leq 2,000,000$	NA	$> 2,000,000 \text{ and } \leq 20,000,000$

Note 1a: All values are given in units of picocuries per gram (pCi/g), and assume a soil density of 1.5 grams per cubic centimeter for INEEL soils

Table 2: Classification Based on Short Lived Radionuclides

- For reference only, see 10-CFR-61.55 for a complete listing of requirements
- To be used ONLY if the waste does not contain any of the radionuclides listed in Table 1
- If waste exceeds values for Class "C" per Table 2, the waste is NOT generally acceptable for near-surface disposal
- For wastes containing mixtures of radionuclides shown in Table 2, the total concentration shall be determined using the sum of fractions rule described in 10-CFR-61.55, paragraph (a) (7)

Radionuclide	Class A	Class B	Class C
Total of all nuclides with $T^{1/2} < 5$ years	$\leq 466,666,666$	See Note 2b	See Note 2b
H-3	$\leq 26,666,666$	See Note 2b	See Note 2b
Co-60	$\leq 466,666,666$	See Note 2b	See Note 2b
Ni-63	$\leq 2,333,333$	$> 2,333,333 \text{ and } \leq 46,666,666$	$> 46,666,666 \text{ and } \leq 466,666,666$
Ni-63 in activated metal	$\leq 23,333,333$	$> 23,333,333 \text{ and } \leq 466,666,666$	$> 466,666,666 \text{ and } \leq 4,666,666,666$
Sr-90	$\leq 26,666$	$> 26,666 \text{ and } \leq 100,000,000$	$> 100,000,000 \text{ and } \leq 4,666,666,666$
Cs-137	$\leq 666,666$	$> 666,666 \text{ and } \leq 29,333,333$	$> 29,333,333 \text{ and } \leq 3,066,666,666$

Note 2a: All values are given in units of picocuries per gram (pCi/g), and assume a soil density of 1.5 grams per cubic centimeter for INEEL soils

Note 2b: There are no limits established for these radionuclides in Class "B" or Class "C" wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class "B" unless the concentrations of other nuclides in Table 2 determine the waste to be Class "C" independent of these nuclides.

Classification of Wastes Containing a mixture of the Radionuclides Listed in Tables 1 and 2

- For reference only, see 10-CFR-61.55 for a complete listing of requirements
- If the concentration of a nuclide does not exceed the requirements of Class "A" listed in Table 1, the Class shall be determined using Table 2
- For wastes containing mixtures of radionuclides shown in Table 1 and 2, the total concentration shall be determined using the sum of fractions rule described in 10-CFR-61.55, paragraph (a) (7)